CLAIMS

I claim:

1. A method of creating a phase shift keying modulated signal, the method comprising:

reading a filter state;

selecting a new symbol;

determining a preferred signal path between said filter state and said new symbol;

retrieving, from a storage device, intermediate values that lie, between said first and said second symbol, on the preferred signal path; and

using said intermediate values to generate said preferred path between said first symbol and said second symbol.

2. The method of claim 1 further comprising storing data points, representing intermediate values at equal time increments along said preferred signal path, between said first symbol and said second symbol, in said storage device.

3. The method of claim 1, further comprising the step of: storing said intermediate values a look-up table.

4. The method of claim 3, wherein said step of storing further comprises: storing said intermediate values as I and Q vectors.

5. The method of claim 3, wherein said step of storing further comprises: storing said intermediate values as R and θ vectors.

6. The method of claim 3, further comprising the step of: using said first symbol and a digital filter state as an index for the look-up table.

7. The method of claim 3 further comprising the steps of: using a sample counter to generate a count signal; and

using said count signal as an index for said look-up table.

8. The method of claim 3 wherein said step of storing further comprises: storing said intermediate values in a non volatile electronic memory.

9. The method of claim 3, the method further comprising the step of: generating data points that correspond to said preferred signal path between said first and said second symbols.

10. The method of claim 9 wherein said step of storing further comprises: storing said look-up table in an electronic memory device.

11. A method of synchronizing the amplitude portion and the phase portion of an amplified signal the method comprising:

separating said amplitude portion and said phase portion of said signal before

amplification;

adjusting said phase portion by an amount that is sufficient to synchronize said amplitude portion and said phase portion after amplification; and

recombining the amplitude and phase portions of the signal for amplification.

12. The method of claim 11 wherein said step of adjusting further comprises applying an offset to the phase of a carrier signal.

13. A method of synchronizing the amplitude portion and phase portion of a signal that is amplified in an amplifier, the method comprising:

determining a phase offset that compensates for a disparity in propagation times of said phase portion and said amplitude portion through the amplifier;

forming a first symbol that includes said phase offset;

selecting a second symbol that includes said phase offset;

selecting a preferred signal path between said first symbol and said second symbol;

selecting intermediate values between said first symbol and said second symbol so that said intermediate values lie on said preferred signal path and contain said phase offset.

14. The method of claim 13 wherein said step of selecting intermediate values further comprises selecting intermediate values that represent equal time increments.

15. The method of claim 13 further comprises the step of: storing said intermediate values in a look-up table.

16. The method of claim 13 further comprising the step of: storing said intermediate values as I and Q vectors.

17. An apparatus for creating a phase shift keying modulated signal comprising:

a first storage device that stores a representation of a first symbol and generates a first index signal;

a second storage device that stores a representation of a second symbol and generates a second index signal;

a sample counter that generates a count signal that is representative of the number of samples between said first symbol and said second symbol; and

a look-up table that generates intermediate values between the first and second symbols in response to said first index signal, said second index signal, and said count signal.

18. The apparatus of claim 17, wherein said look-up table comprises an electronic memory containing signal values.

19. The apparatus of claim 17 wherein said look-up table comprises a look-up table that generates adjusted values, said adjusted values including a phase offset.

20. The apparatus of claim 17, wherein the look-up table comprises a look-up table that generates I and Q values.

21. The apparatus of claim 17, wherein the look-up table comprises a look-up table that generates R and θ values.

22. An apparatus that adjusts a phase portion of a independently of an amplitude portion of a phase shift keying signal (PSK), the apparatus comprising:

a phase shift keying (PSK) signal generator that generates said ; PSK signal;

a decomposition circuit that separates amplitude and phase components of said PSK signal to produce a PSK phase component signal and a PSK amplitude component signal;

a phase offset generator that generates a phase change signal;

a summing circuit connected to said PSK phase component signal and said phase change signal that adjusts said phase portion of said PSK phase component signal in response to said phase change signal, and produces a phase adjusted phase component signal.

23. An apparatus as in 21 wherein the PSK signal is the I component of a Multiple Phase Shift Keying signal.

24. An apparatus as in 21 wherein the PSK signal is the Q component of a Multiple Phase Shift Keying signal.

25. An apparatus as in claim 21 further comprising:

a modulator that accepts the phase adjusted phase component signal and produces a modulated signal that is modulated by said phase adjusted phase component signal;

an amplifier which receives said modulated signal and adjusts the amplitude of said modulated signal in proportion to said PSK amplitude component signal.